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0^h Gr. 1882.	α—A	δ—D	0^h Gr. 1882.	α—A	δ—D
	s	″		s	″
Oct. 13	38·18	159·4	Nov. 6	23·46	59·6
14	37·47	170·5	7	26·11	42·5
15	36·50	180·5	8	28·59	25·1
16	35·27	189·2	9	30·88	− 7·5
17	33·78	196·6	10	+32·98	+ 10·2
18	32·05	202·6	11	34·87	27·6
19	30·09	207·2	12	36·55	44·9
20	27·92	210·3	13	38·00	62·0
21	−25·54	−212·0	14	39·21	78·7
22	22·98	212·1	15	40·18	94·9
23	20·25	210·8	16	40·90	110·6
24	17·37	208·0	17	41·36	125·6
25	14·37	203·7	18	41·58	139·8
26	11·27	197·9	19	41·54	153·1
27	8·08	190·8	20	+41·26	+165·4
28	4·82	182·4	21	40·72	176·9
29	− 1·53	172·7	22	39·94	187·3
30	+ 1·77	161·8	23	38·92	196·5
31	5·06	−149·8	24	37·66	204·5
Nov. 1	8·33	136·7	25	36·18	211·3
2	11·55	122·7	26	34·49	216·8
3	14·69	107·9	27	32·59	221·0
4	17·73	92·4	28	30·50	224·0
5	20·66	76·3	29	28·23	225·6
			Nov. 30	+ 25·79	+225·8

It would be well to test the correctness of this ephemeris by some early observations of *Iapetus.*

Ephemeris of the Satellite of Neptune, 1882–83.

By A. Marth, Esq.

P, angle of position of the minor axis of the satellite's apparent orbit, in the direction of superior conjunction.

a, b, major and minor semi-axis of the apparent orbit.

$u-U$, longitude of the satellite in its orbit reckoned from the point which is in superior conjunction with the planet, or in opposition to the Earth.

$U+180°$, planetocentric longitude of the Earth, reckoned in the satellite's orbit from the ascending node on the equator.

B, latitude of the Earth above the plane of the orbit.

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0h Gr.	P	*a*	*b*	*u*−U	Diff.	U	B
1882.	°	″	″	°	°	°	°
Aug. 22	317·28	16·52	7·01	301·72	612·59	140·13	25·10
Sept. 1	317·26	16·61	7·04	194·31	·54	140·16	25·10
11	317·20	16·70	7·07	86·85	·48	140·25	25·07
21	317·11	16·78	7·09	339·33	·43	140·38	25·01
Oct. 1	316·99	16·85	7·10	231·76	·38	140·56	24·94
11	316·84	16·90	7·10	124·14	·35	140·78	24·85
21	316·67	16·94	7·09	16·49	·32	141·02	24·74
31	316·49	16·97	7·07	268·81	·30	141·29	24·61
Nov. 10	316·30	16·97	7·03	161·11	·29	141·56	24·48
20	316·12	16·96	6·99	53·40	·29	141·83	24·35
30	315·94	16·93	6·95	305·69	·30	142·09	24·23
Dec. 10	315·78	16·89	6·90	197·99	·33	142·33	24·11
20	315·64	16·83	6·84	90·32	·36	142·53	24·00
30	315·53	16·75	6·79	342·68	·41	142·69	23·91
1883. Jan. 9	315·46	16·67	6·74	235·09	·45	142·80	23·85
19	315·42	16·58	6·69	127·54	·40	142·86	23·81
29	315·41	16·48	6·65	20·04	·50	142·87	23·80
Feb. 8	315·44	16·39	6·62	272·60	·62	142·81	23·81
18	315·51	16·30	6·59	165·22	·67	142·71	23·85
28	315·61	16·21	6·57	57·89	612·72	142·55	23·91
Mar. 10	315·75	16·12	6·56	310·61		142·35	24·00

If the values of P, a, b, and $u-\mathrm{U}$ are interpolated for the times for which the apparent places of the satellite are required, the position-angle p and distances s are found by

$$s \sin(\mathrm{P}-p) = a \sin(u-\mathrm{U}),$$
$$s \cos(\mathrm{P}-p) = b \cos(u-\mathrm{U}).$$

The satellite moves in the direction of *de*creasing position-angles, and will be at its greatest elongations ("*nf*" in posit. P+90° and distance a, "*sf*" in posit. P−90°) and at its conjunctions ("*sup.*" in posit. P and distance b, "*inf.*" in posit. P−180°) at the following hours, Greenwich M. T.:—

"nf." elong.		"sup." conj.		"sp." elong.		"inf." conj.	
1882.	h		h		h		h
Aug. 21	11·6	Aug. 22	22·8	Aug. 24	10·1	Aug. 25	21·3
27	8·6	28	19·9	30	7·1	31	18·4
Sept. 2	5·7	Sept. 3	16·9	Sept. 5	4·2	Sept. 6	15·4
8	2·7	9	14·0	11	1·2	12	12·5
13	23·8	15	11·0	16	22·3	18	9·6

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